

**Silicon PNP Power Transistors 2SA1306 2SA1306A 2SA1306B**

**DESCRIPTION**

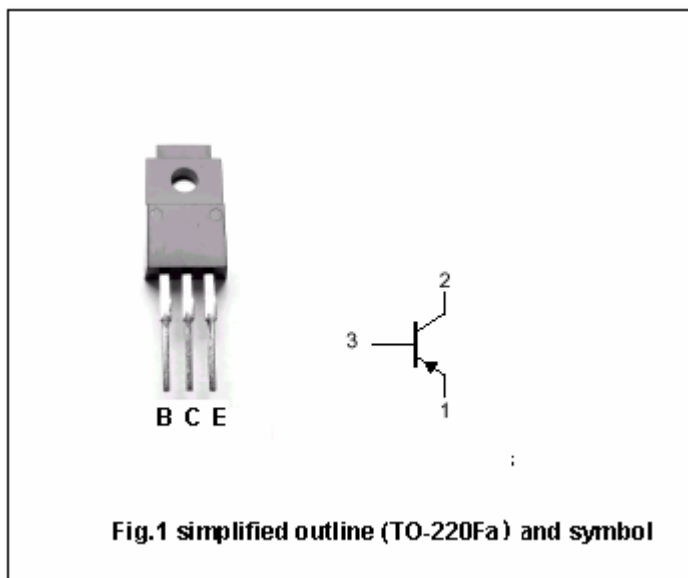
- With TO-220Fa package
- Complement to type  
2SC3298,2SC3298A,2SC3298B

**APPLICATIONS**

- Power amplifier applications
- Driver stage amplifier applications

**PINNING**

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Emitter     |
| 2   | Collector   |
| 3   | Base        |



**Absolute maximum ratings(Ta=25°C)**

| SYMBOL           | PARAMETER                   | CONDITIONS           | VALUE   | UNIT |
|------------------|-----------------------------|----------------------|---------|------|
| V <sub>CBO</sub> | Collector-base voltage      | 2SA1306              | -160    | V    |
|                  |                             | 2SA1306A             | -180    |      |
|                  |                             | 2SA1306B             | -200    |      |
| V <sub>CEO</sub> | Collector-emitter voltage   | 2SA1306              | -160    | V    |
|                  |                             | 2SA1306A             | -180    |      |
|                  |                             | 2SA1306B             | -200    |      |
| V <sub>EBO</sub> | Emitter-base voltage        | Open collector       | -5      | V    |
| I <sub>C</sub>   | Collector current           |                      | -1.5    | A    |
| I <sub>B</sub>   | Base current                |                      | -0.15   | A    |
| P <sub>C</sub>   | Collector power dissipation | T <sub>C</sub> =25°C | 20      | W    |
| T <sub>j</sub>   | Junction temperature        |                      | 150     | °C   |
| T <sub>stg</sub> | Storage temperature         |                      | -55~150 | °C   |

## Silicon PNP Power Transistors

## 2SA1306 2SA1306A 2SA1306B

## CHARACTERISTICS

T<sub>j</sub>=25 °C unless otherwise specified

| SYMBOL               | PARAMETER                            | CONDITIONS                                       | MIN  | TYP. | MAX  | UNIT |
|----------------------|--------------------------------------|--|------|------|------|------|
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | 2SA1306  | -160 |      |      | V    |
|                      |                                      | 2SA1306A   | -180 |      |      |      |
|                      |                                      | 2SA1306B   | -200 |      |      |      |
| V <sub>CEsat</sub>   | Collector-emitter saturation voltage | I <sub>C</sub> =-0.5A, I <sub>B</sub> =-50mA     |      |      | -1.5 | V    |
| V <sub>BE</sub>      | Base-emitter voltage                 | I <sub>C</sub> =-0.5A, V <sub>CE</sub> =-5V      |      |      | -1.0 | V    |
| I <sub>CBO</sub>     | Collector cut-off current            | V <sub>CB</sub> =-160V, I <sub>E</sub> =0        |      |      | -1.0 | μA   |
| I <sub>EBO</sub>     | Emitter cut-off current              | V <sub>EB</sub> =-5V, I <sub>C</sub> =0          |      |      | -1.0 | μA   |
| h <sub>FE</sub>      | DC current gain                      | I <sub>C</sub> =-0.1A; V <sub>CE</sub> =-5V      | 70   |      | 240  |      |
| C <sub>ob</sub>      | Output capacitance                   | I <sub>E</sub> =0; V <sub>CB</sub> =-10V, f=1MHz |      | 30   |      | pF   |
| f <sub>T</sub>       | Transition frequency                 | I <sub>C</sub> =-0.1A; V <sub>CE</sub> =-10V     |      | 100  |      | MHz  |

◆ h<sub>FE</sub> Classifications

| O      | Y       |
|--------|---------|
| 70-140 | 120-240 |

Silicon PNP Power Transistors

2SA1306 2SA1306A 2SA1306B

PACKAGE OUTLINE

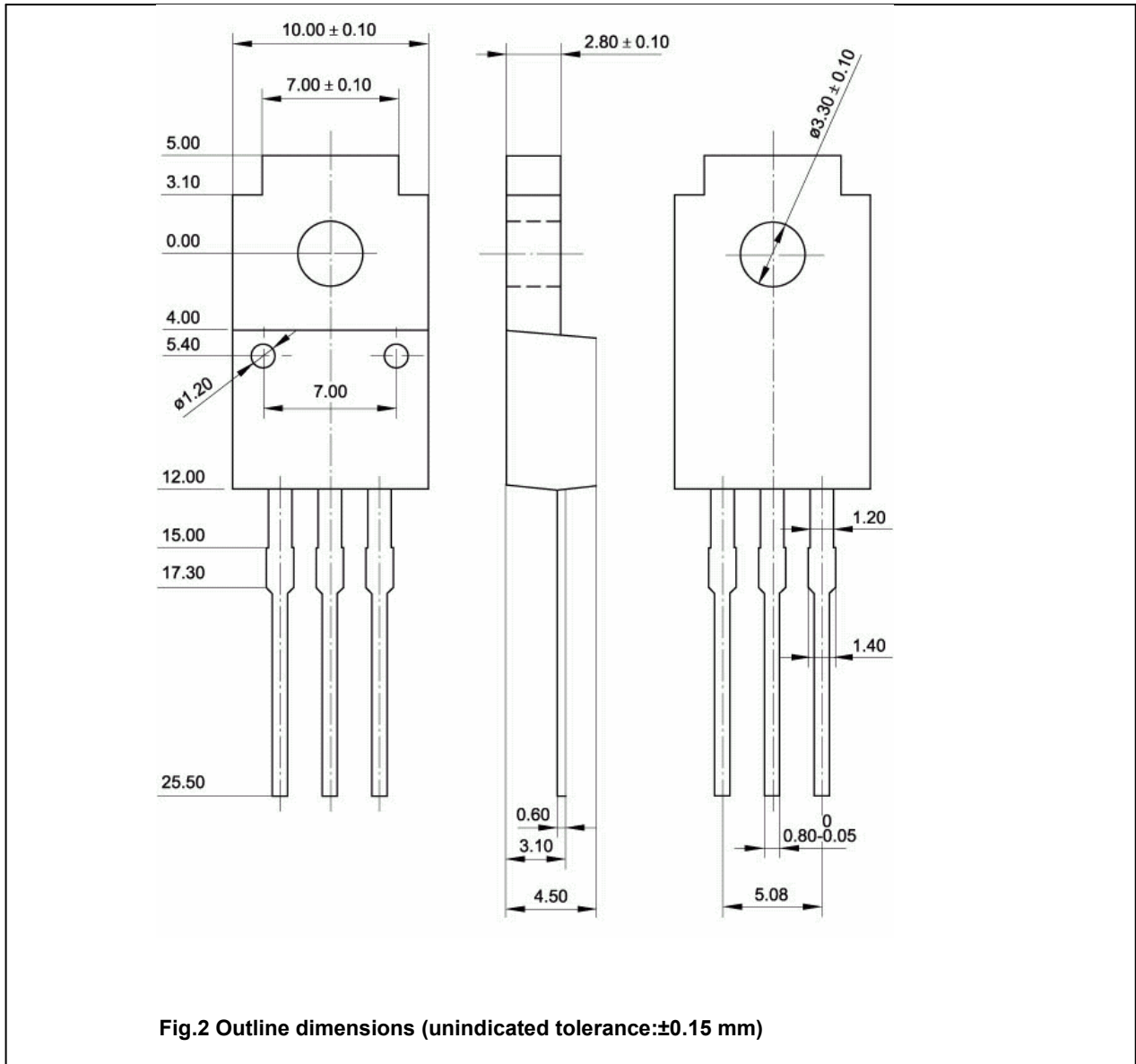


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)